

Affidavit under 37 C.F.R. 1.132
U.S. Patent Application Serial No. 09/814,402

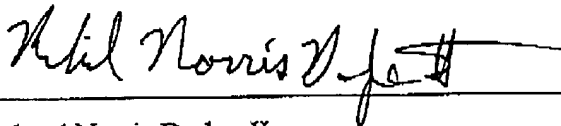
Declaration of Richard N. Dodge

I, Richard Norris Dodge II, of 2717 North McDonald Street, Appleton, Wisconsin 54911, U.S.A., declare as follows:

1. I am a Technical Leader employed by Kimberly-Clark Corporation, and I have held this position for twelve years. In the course of my work at Kimberly-Clark, I have on a large number of occasions carried out and/or supervised the testing of the physical properties of superabsorbent polymers and absorbent composites and articles using pre-defined test procedures. In particular, I have often repeated test procedures defined in patents and patent applications in order to test the properties of samples of such materials.

2. I prepared and tested four (4) absorbent composite samples based on U.S. Patent No. 5,516,569 to Veith et al. utilizing FAVOR 880 superabsorbent polymer, available from Stockhausen, Inc., a business having offices located in Greensboro, North Carolina, U.S.A. The four samples had a target superabsorbent content of 60 wt%, 70 wt%, 80 wt% and 90 wt%, respectively. The four samples were then tested for web loss using the Shakeout Test procedure set forth in the Specification of the present application, Serial No. 09/814,402. The samples demonstrated a web loss of 5%, 11%, 13% and 18%, respectively. The sample preparation and testing information and data are contained in Attachment 1.

I confirm that the above statements are true to the best of my knowledge and belief.



Richard Norris Dodge II

Date: May 11, 2006

Attachment 1

Preparation and testing of Examples based on Veith (U.S. Patent No. 5,516,569):

Absorbent web samples (i.e., composites) were prepared in accordance with Veith having 60%, 70%, 80% and 90% superabsorbent material (SAM). The 60% sample was similar to Veith Example #6 and the 80% sample was similar to Veith Example #19.

The SAM utilized was FAVOR 880 (available from Stockhausen, Inc., a business having offices located in Greensboro, North Carolina, U.S.A.). This SAM was sieved to obtain particles in the range of 300 to 600 microns.

The pulp fibers utilized were CR-1654 (available from Bowater Inc., a business having offices located in Greenville, South Carolina U.S.A.).

The following 400 gsm composites were made using the same 3" handsheet former as described in Example 1 the present application (09/814402). For each sample, a sheet of tissue paper (approximately 0.07 g) was placed over the screen in the web forming chamber prior to starting the process to facilitate lifting and handling of the sample after web formation. After web formation was complete, a second sheet of tissue paper of the same type as the first sheet was placed over the resulting webs. The conditions for each sample can be seen below in Table 1.

Table 1

Target SAM wt%	Mass of pulp fibers (grams)	Mass of FAVOR 880 (grams)
60	0.73	1.09
70	0.55	1.27
80	0.36	1.46
90	0.18	1.64

The tissue paper from the forming (bottom) side of web was then removed. The dry web was then sprayed with approximately 0.4 g of distilled water onto the web with a spray bottle (available from Tesch Chemical Company, Inc. having a place of business in Appleton, Wisconsin, U.S.A.) positioned approximately 12 inches above each sample. The top tissue was then removed. The conditions after water addition to the web can be seen below in Table 2.

Table 2

Target SAM wt% (dry basis)	Mass of Composite before Water Addition (gm)	Mass of Composite after water addition (gm)	Calculated wt% Pulp Fiber (wet basis)	Calculated wt% SAM (wet basis)	Calculated wt % Water (wet basis)
60	1.72	2.13	32.3	48.5	19.2
70	1.74	2.13	24.5	57.2	18.3
80	1.76	2.13	16.5	66.1	17.4
90	1.65	2.19	7.5	67.8	24.7

The samples were then embossed on a Carver Press, model 4591 (available from Carver, Inc.) with the top (flat) plate heated to 140 °F (60 °C). The bottom surface was a square pattern (0.59" grid pattern) with approximately 17% land area. The embossing gaps for each sample can be seen below in Table 3.

Table 3

Target SAM wt% (dry basis)	Embossing Gap (inches)
60	0.017
70	0.017
80	0.007
90	0.007

The samples were then dried in an oven at 60 °C for approximately 14 hours. The samples were then tested for shakeout using the Shakeout Test described in the present application (09/814402). The results can be seen below in Table 4.

Table 4

Target SAM wt% (dry basis)	Web Loss (%)
60	5
70	11
80	13
90	18

Table 5 below provides a comparison of Shakeout values of the Applicants' Example 2 and Example 3 with the comparative samples described above made in accordance with Veith (5,516,569).

Table 5

Target SAM % (dry basis)	Web Loss (%) 09/814402 Example 2	Web Loss (%) 09/814402 Example 3	Web Loss (%) Samples made in accordance with Veith (5,516,569)
60	3	3	5
70	4	4	11
80	1	1	13
90	1	2	18